

REMARKS

Original claims 1-20 have been cancelled and replaced with new claims which have been written to point out more particularly and distinctly define that which Applicant believes to be his invention. The original claims were somewhat inartfully drafted in that they specified the coating composition to be comprised of the monomer reactants instead of the polymer resulting from their reaction as clearly indicated by each of the 18 examples. New claim 1 also points out more particularly the stoichiometric relationship between the aromatic diisocyanate and the diisocyanate-reactive acid, anhydride and/or hydroxy functional reactants. Claim 21 also specifies a mol percent of trimellitic anhydride of 0.75 mol percent, that value being supported by working examples 2-18 wherein the mol percentage of trimellitic anhydride ranges from 0.75 (example 18) to 100 mol percent (example 11). Exemplified, as well, are polymer solutions produced by the reaction of an aromatic diisocyanate with trimellitic anhydride and at least one diacid (examples 2, 3, 4, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17 and 18); with at least one diacid and a dihydroxy functional compound (example 4); with a dihydroxy functional compound (example 5); with at least one diacid and an anhydride functional reactant (examples 7 and 8); and at least one diacid and a trihydroxy functional reagent (example 18), all with use in combination with dispersed particulate fluropolymer (examples 2-10 and 12-18) or in combination with a mineral filler (example 9). New claims 34 and 35 correspond to original claims 5 and 14 (found allowable by the Examiner if rewritten in independent form), focusing on the craze resistant coating composition formed using diphenylsilanediol as a hydroxy functional reactant and magnet wire including a craze resistant coating of that composition. The new claims find full support in the specification and originally presented claims. No new matter is introduced by virtue of the tendered new claims 21-38.

Original claims 1-4, 6-13 and 15-17 stand objected to under 35 U.S.C. §103(a) as being unpatentable over Hsu, et al ('747) in view of the combined teachings of Chihara, et al. and Charrier. Claims 1-4, 6-13 and 15-17 have been cancelled and replaced with new claims 21-38 which specify the craze resistant coating composition as comprising a solvent solution of a polyamideimide polymer composition formed by the reaction of an aromatic diisocyanate with 0.75 mol percent to 100 mol percent of trimellitic anhydride, and one or more acid, anhydride or hydroxy functional reactants (among those listed) or a vinyl terminated silicone oil and an organic solvent and further specifying that the aggregate amount of the trimellitic anhydride and the other acid, anhydride or alcohol functional reactants is substantially the stoichiometric equivalent of the amount of the diisocyanate, and still further specifying that dispersed in said polymer solution is a particulate component selected from a fluropolymer and a mineral filler.

The primary Hsu, et al. ('747) reference does, as the Examiner points out, disclose a composition used for coating wires that includes diols, triols, diisocyanates and trimellitic anhydride and/or diacids. However, that reference teaches a specific reaction order and stoichiometry much different than that specified in new claims 21-33. More particularly, the primary reference teaches the preparation of a first diisocyanate terminated imid polymer for a reaction with a second hydroxy terminated polymer component to produce poly-imid-urethane compounds clearly distinct from those described and claimed in the present application. Moreover, as the Examiner notes, the primary '747 patent reference fails to teach or suggest the use of a dispersed particulate fluropolymer or mineral filler to provide compositions exhibiting enhanced craze resistance in magnet wire coating compositions. The Examiner refers to the Charrier reference and its teaching with respect to fluoroplastics. Actually, that reference teaches specifically that fluoroplastics have high coefficients of thermal expansion that are sometimes associated with dimensional stability problems. The use of such components as fillers and coating compositions would not be suggested for magnet wires which are typically subjected to thermo-cycling and associated expansion and contraction of the fluoroplastic filler; the use of such fillers, respectfully, would not be suggested for craze resistant magnet wire coatings. Indeed, their high coefficient of thermal expansion would reasonably contraindicate their use in coating compositions subjected to thermal-cycling under normal use. The differences between the subject matter claimed and the prior art, as a whole, are such that Applicant's claimed invention would not have been obvious to one of ordinary skill in the art at the time the invention was made. The rejection for obviousness over the '747 patent in view of the combined teachings of Chihara, et al. and Charrier does not seem proper when applied to the new claims. Applicant respectfully contends that the invention defined by new claims 21-33 meets the statutory requirement for non-obviousness over the '747 patent in view of the combined teachings of Chihara, et al and Charrier. Reconsideration of that rejection is requested.

Original claims 18-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hsu et al. ('747) in view of the combined teachings of Chihara et al. and Charrier as applied to claims 1-4, 6-13, and 15-17 above, and further in view of Matsuura et al. New claims 37 and 38 correspond generally to original claims 13-20. Applicant refers to the remarks in response to the rejection above over the '747 patent in view of the combined teachings of Chihara et al. and Charrier. While the cited Matsuura et al. does disclose an insulated wire that uses either polyamideimide or polyester as the primer layer, the differences discussed above between the invention as specified by new claims 21-38 and the cited reference combination are such that the presently claimed invention would not have been obvious to one of ordinary skill in

the art at the time the invention was made. Reconsideration of that rejection leading to withdrawal of that rejection is requested.

Original claims 1-4, 6-13, and 15-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hsu et al. ('747) in view of the combined teachings of Markusch et al., Roitman et al., and Charrier. Applicants have detailed above the invention as specified by new claims 21-38 which specify the craze resistant coating composition as comprising a solvent solution of a polyamideimide polymer composition formed by the reaction of an aromatic diisocyanate with 0.75 mol percent to 100 mol percent of trimellitic anhydride and one or more acid, anhydride or hydroxyfunctional reactants or a vinyl terminated silicone oil, and further specifying that the aggregate amount of trimellitic anhydride and other functional reactants is substantially a stoichiometric equivalent of the amount of the diisocyanate. Not one of the cited references teaches or suggests the reactant combination/stoichiometry required by the new claims. Reconsideration of the rejection in view of Applicant's cancellation of original claims 1-20 is requested.

Original claims 18-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hsu et al. ('747) in view of the combined teachings of Markusch et al., Roitman et al., and Charrier as applied to claims 1-4, 6-13 and 15-17 above, and further in view of Matsuura et al. Claims 18-20 have been cancelled. New claims 21-38 specify the craze resistant coating composition as comprising a solvent solution of a polyamideimide polymer composition formed by the reaction of an aromatic diisocyanate with 0.75 mol percent to 100 mole percent of trimellitic anhydride, and one or more acid, anhydride or hydroxy functional reactants or a vinyl terminated silicone oil in an organic solvent, and further specifying that the aggregate amount of the trimellitic anhydride and the other acid anhydride are alcohol functional reagents is substantially the stoichiometric equivalent of the amount of the diisocyanate and still further specifying that dispersed in said polymer solution is a particular component selected from a fluoro polymer and a mineral filler. Not one of the cited references describes or suggests the reagent combination/stoichiometry specified by new claims 21-38. The differences between the claimed invention as specified in new claims 21-38 and the cited art are such that Applicant's invention as a whole would not have been obvious to one of ordinary skill in the art at the time the invention was made. Reconsideration of the rejection in view of cancellation of original claims 18-20, leading to withdrawal of the rejection is requested.

Original claims 1-4, 6-13, and 15-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hsu et al ('213) in view of the combined teachings of Hsu et al ('747), Chihara et al. and Charrier. Each of the original claims has been cancelled and replaced with new claims 21-37 which specify the present invention. More particularly in terms of the

stoichiometric relationship between the aromatic diisocyanate and the diisocyanate reactive acid, anhydride and/or hydroxy functional reactants used to form the polymer solution. More particularly, the polyamideimide polymer composition is specified as formed by the reaction of a diisocyanate with 0.75 mol percent to 100 mol percent of trimellitic anhydride, and one or more acid, anhydride or hydroxy functional reactants or a vinyl terminated silicone oil in an organic solvent, and further specifying that the aggregate amount of the trimellitic anhydride and the other acid, anhydride or alcohol functional reactions is substantially the stoichiometric equivalent of the amount of diisocyanate, and still further specifying that dispersed in said polymer solution is a particulate component selected from a fluoro polymer and a mineral filler. Not one of the cited references describes or suggests the reagent combination/stoichiometry specified by the present claims. The differences between the present invention as defined by new claims 31-38 and the prior art are such that Applicant's invention as a whole would not have been obvious to one of ordinary skill in the art at the time the invention was made. Reconsideration of the rejection in view of the cancellation of all original claims and submission of new claims 21-38 is requested.

Claims 18-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hsu et al. ('213) in view of the combined teachings of Chihara et al., Charrier, and Hsu et al. ('747) as applied to claims 1-4, 6-3 and 15-17 above, and further in view of Matsuura et al. The differences between the subject matter specified by new claims 21-38 and the teachings of the cited references when considered alone or in combination are such that Applicant's invention would not have been obvious to one of ordinary skill in the art at the time the invention was made. Not one of the cited references describes or suggests the combination of reagents/stoichiometry specified by the new claims. Respectfully, the rejection of original claims 18-20 cannot be applied to meet the elements of new claims 21-38. Reconsideration of that rejection leading to its withdrawal is requested.

Original claims 1-4, 6-13 and 15-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hsu et al. ('213) in view of the combined teachings of Markusch et al., Roitman et al., Charrier, and Hsu et al. ('747). Each of claims 1-4, 6-13 and 15-17 have been cancelled. New claims 21-38 specify reagents/stoichiometry for preparing the polyamideimide which reagents/stoichiometry are not described or suggested by any of the cited art references. The rejection of original claims 1-4, 6-13, and 15-17 cannot logically be applied to new claims 21-38 for the reason that not one of the references describes or suggests the reagent combination/stoichiometry required by the new claims for preparation of the polyamideimide solution. Reconsideration of the rejection in view of cancellation of original claims and the specification of reactant/stoichiometry in new claims 21-38 is requested.

Original claims 18-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hsu et al. ('213) in view of the combined teachings of Markusch et al., Roitman et al., Charrier, and Hsu et al. ('747) as applied to claims 1-4, 6-13 and 15-17 above and further in view of Matsuura et al. Claims 18-20 have been cancelled and the distinguishing elements of new claims 21-38 have been discussed extensively above. Respectfully, not one of the cited references describes or suggests the reagent combination/stoichiometry specified by the new claims. Reconsideration of the rejection is requested.

Applicant notes with appreciation the Examiner's finding that original claims 5 and 14 embraced allowable subject matter and would be allowable if rewritten in independent form, including all limitations of the base claim and intervening claims. As mentioned above, new claims 34 and 35 correspond to original claims 5 and 14 focusing on the craze resistant coating composition formed using diphenylsilanediol as a hydroxy functional reactant and magnet wire including a craze resistant coating of that composition.

In sum, Applicant respectfully contends that the subject matter specified by new claims 21-38 is patentably distinguished over the cited art references. Reconsideration of the invention as specified by the new claims, leading to withdrawal of all rejections and passage of the application to issuance is requested.

Respectfully submitted



Rebecca L. Ball
Registration No. 46,535
Attorney for Applicants

SRL/RVB:glt
Indianapolis, Indiana 46204
317-231-7258
317-231-7511